UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/990,753	11/16/2001	Heeloo Chung	3981-26	3370

20575 7590 09/21/2005		EXAMINER
MARGER JOHNSON & MCCOLLOM, P.C.		FERRIS, DERRICK W
210 SW MORRISON STREET, SUITE 400		
PORTLAND, OR 97204	ART UNIT	PAPER NUMBER
	2663	

DATE MAILED: 09/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO 90C (Rev 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/990,753	CHUNG ET AL.
	Examiner	**Art Unit**	
	Derrick W. Ferris	2663	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>16 November 2001</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-44</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-7,11,12,14-17,19-27,29-38 and 41-44</u> is/are rejected.

7)☒ Claim(s) <u>8-10,13,18,28,39 and 40</u> is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>28 January 2002</u> is/are: a)☐ accepted or b)☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

        1.☐ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____.

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Drawings

1.   The drawings are objected to because the input memory in figure 1 should be <u>32</u> instead

of 33 as cited at e.g., page 3, line 30 of applicant's specification. Corrected drawing sheets in

compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid

abandonment of the application. Any amended replacement drawing sheet should include all of

the figures appearing on the immediate prior version of the sheet, even if only one figure is being

amended. The figure or figure number of an amended drawing should not be labeled as

"amended." If a drawing figure is to be canceled, the appropriate figure must be removed from

the replacement sheet, and where necessary, the remaining figures must be renumbered and

appropriate changes made to the brief description of the several views of the drawings for

consistency. Additional replacement sheets may be necessary to show the renumbering of the

remaining figures. Each drawing sheet submitted after the filing date of an application must be

labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR

1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and

informed of any required corrective action in the next Office action. The objection to the

drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

2.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an

international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3.   **Claims 1-4, 6, 7, 11, 15-17, 19, 22-27, 29, 32-38, 41, and 42** are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent Application 2003/0016686 A1 to *Wynee et al.* ("*Wynee*").

As to **claim 1**, see e.g., figure 2b where the input for receiving packets of data, each packet associated with an output queue is taught e.g., as the protocol processor 20. Specifically, the protocol processor 20 segments the received packet(s) on bus 12a into cells and then stores the sequence of cells in internal memory using traffic manager 22. The packet is associated with an output queue based on the flow ID of the packet which reflects the VOQ of the packet. An intermediate storage facility having a plurality of blocks is taught as cell memory 32, see e.g., figure 32. An intermediate storage facility manager is taught e.g., as traffic manager 22 or as data path controller 30 and queuing system 36. As such, traffic manager 22 or data path controller 30 and queuing system 36 are configured to assign particular blocks of the intermediate storage facility to output queues, and store one or more packets associated with output queues into the blocks assigned to those output queues. In particular, cells are stored in blocks and given a BLOCK_ID.

As to **claim 2**, the pointer repository is taught as the queue used to store the BLOCK_IDs (i.e., pointers). A trunk manager is taught e.g., as also data path controller 30 and queuing system 36 where the trunk is the packet flow.

As to **claim 3**, packets are broken down into one or more cells, these cells are stored in blocks in cell memory 32 and then outputted to a common output port corresponding to a VOQ.

As to **claim 4**, the cells are stored prior to entering the traffic manager 22, see e.g., paragraphs 0036-0038 on page 3.

As to **claim 6**, see e.g., paragraph 0037 on page 3.

As to **claim 7**, the second storage facility is the traffic manager for the output port, see e.g., figure 2b with respect to figure 3. The intermediate storage manager is traffic manager 26 or data path controller 30 and queuing system 36. A command is the LOAD command as taught by the reference.

As to **claim 11**, the output queue manager is the traffic manager 26 or data path controller 30 and queuing system 36

As to **claim 15**, see similar rejection to claim 1. In particular, since the traffic manager 22 or data path controller 30 and queuing system 36 are configured to assign particular blocks, they are configured to sort the data packets into groups, see e.g., paragraph 0042 on page 4.

As to **claim 16**, see similar rejection to claim 3.

As to **claim 17**, the block storage memory is cell memory 32 and the block storage memory manager coupled to the buffer memory manager is data path controller 30.

As to **claim 19**, the second block storage memory is output queues 37 shown e.g., in figure 3 which is coupled to the data path controller (i.e., buffer memory manager).

As to **claim 22**, each cell is stored in internal memory, see e.g., paragraph 0035 before being sent to the traffic manager.

As to **claim 23**, see e.g., figures 2a and 2b where the protocol processors 20 and 28 are the packet processors coupled to one or more of the input ports and output ports.

As to **claim 24**, see similar rejection to claim 1. In addition, note that the switch fabric is cross-point switch 16 shown e.g., in figure 1. Also note that the routing controller 18 is responsible for a scheduler configured to direct the packet buffer memory to output the groups through the switch fabric, see e.g., paragraph 0035 on page 3.

As to **claim 25**, see similar rejection to claim 16.

As to **claim 26**, see similar rejection to claim 17.

As to **claim 27**, see e.g., see e.g., figure 3 where the command is the read/write command.

As to **claim 29**, see similar rejection to claim 19.

As to **claim 32**, see similar rejection to claim 24.

As to **claim 33**, see similar rejection to claim 3.

As to **claim 34**, see similar rejection to claim 17.

As to **claim 35**, see similar rejection to claim 1.

As to **claim 36**, the list of blocks are stored by the queuing system 36, see e.g., figure 4.

As to **claim 37**, the predetermined group is based on the flow ID (i.e., FIN). As such, the data path controller 30 also reads from the memory device or cell memory 32.

As to **claim 38**, see similar rejection to claim 7.

As to **claim 41**, each flow is related by a block ID.

As to **claim 42**, the added pointers are the block ID values, see e.g., paragraph

0044 on page 4.

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

5.   **Claims 5, 12, 14, 20, 30, 43 and 44** are rejected under 35 U.S.C. 103(a) as being

unpatentable over U.S. Patent Application 2003/0016686 A1 to *Wynee et al.* (*"Wynee"*) in view

of U.S. Patent Application No. 2003/0084246 A1 to *Tran et al.* (*"Tran"*).

As such to **claim 5**, *Wynee* discloses limitations in the base claim.

Wynee is silent or deficient to the further limitation us using a SRAM circuit.

Tran teaches the further recited limitation above at e.g., figure 3 with respect to

buffer memory 31.

The proposed modification of the above-applied reference(s) necessary to arrive

at the claimed subject matter would be to modify *Wynee* by clarifying that the cell

memory 32 is the a SRAM circuit.

As such, examiner notes that it would have been obvious to one skilled in the art

prior to applicant's invention to include the above limitation. In particular, the motivation

for modifying the reference or to combine the reference teachings would be because

SRAM circuits are inexpensive. In particular, *Tran* cures the above-cited deficiency by

providing a motivation found at e.g., paragraph 0006 on page 1. Second, there would be a reasonable expectation of success since both references teach storing cells (see e.g., paragraph 0028 on page 2 of *Tran*. Thus the references either in singular or in combination teach the above claim limitation(s).

As to **claims 12**, see similar rejection to claim 5.

As to **claims 14**, see similar rejection to claim 5. In addition see e.g., figure 3 of *Tran* with respect to output SDRAM controller e.g., as state machine 40.

As to **claims 20**, see similar rejection to claim 5.

As to **claim 30**, see similar rejection to claim 5.

As to **claim 43**, see similar rejection to claim 5.

As to **claim 44**, the limitation is met since when the cell is ready to be sent it is stored in cell memory such that the amount of data stored in the blocks of the memory device is equal to a threshold.

6.   **Claims 21 and 31** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application 2003/0016686 A1 to *Wynee et al.* ("*Wynee*") in view of "Data and Computer Communications" to *William Stallings* ("*Stallings*").

As such to **claim 21**, *Wynee* discloses limitations in the base claim.

Wynee is silent or deficient to the further limitation of the Internet. In particular, *Wynee* teaches the transmission of packets.

Stallings teaches the further recited limitation above at page pages 28-29 since packets are known to traverse the Internet.

The proposed modification of the above-applied reference(s) necessary to arrive at the claimed subject matter would be to modify *Wynee* by clarifying that packets are transmitted over a network where the network is the Internet.

As such, examiner notes that it would have been obvious to one skilled in the art prior to applicant's invention to include the above limitation. In particular, the motivation for modifying the reference or to combine the reference teachings would be to allow different parties to communicate with one another over a known network such as the Internet. In particular, *Tran* cures the above-cited deficiency by providing a motivation found at e.g., page 28 since a known set of networks is the Internet.

As to **claim 31**, see similar rejection to claim 21.

Allowable Subject Matter

7.   **Claims 8-10, 13, 18, 28, 39, and 40** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Derrick W. Ferris whose telephone number is (571) 272-3123. The examiner can normally be reached on M-F 9 A.M. - 4:30 P.M. E.S.T.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on (571)272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.
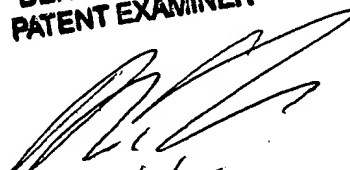
Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

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system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Derrick W. Ferris
Examiner
Art Unit 2663

DWF